

Serial No.: 09/593,912

### **REMARKS**

Claims 1-26 are pending in the application. Claims 1, 7, 13 and 16 have been amended herein. Favorable reconsideration of the application, as amended, is respectfully requested.

#### ***I. AFFIRMATION OF ELECTION***

Applicant hereby confirms the election of Group I (Claims 1-18) previously made orally by applicant's undersigned representative.

#### ***II. REJECTION OF CLAIMS 1-18 UNDER 35 USC §102(b)***

Claims 1-18 stand rejected under 35 USC §102(b) based on *Engdahl et al.* Withdrawal of the rejection is respectfully requested for at least the following reasons.

##### ***i. Present Invention***

The present invention relates to a system and method for *interfacing* between a media access controller (MAC) and a number of physical layer devices (PHYs). For example, Fig. 3 of the present application (reproduced below) illustrates how a common bus 133 serves as a direct interface between the MAC 120 and PHYs 0-31, for example.

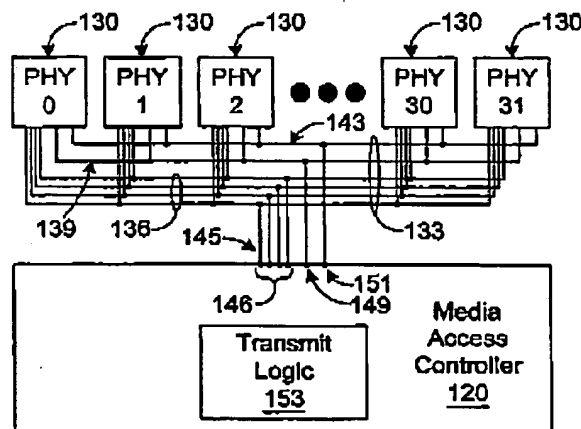


Fig. 3 of Present Application

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As is well known, the MAC 120 is part of the data link layer in network communications. The PHYs are part of the physical layer. In accordance with the present invention, the MAC 120 and PHYs are coupled via the common bus 133. In such sense, the common bus 133 serves as a direct interface between the data link layer and the physical layer. (See, e.g., Spec., p. 11, Ins. 27-30).

According to the present invention, the MAC communicates via the common bus with the physical layer devices which share the common bus. Data is transmitted between the MAC in the data link layer and the respective PHYs in one of a number of time slots in a time division multiplexed transmission.

Claims 1, 7, 13 and 16 have been amended herein to emphasize that it is on a common bus serving as a direct interface between the data link layer and the physical layer that the MAC communicates with the respective PHYs via time division multiplexing. Such direct interface is exemplified in Fig. 3 of the present application as the common bus 133 directly couples the MAC 120 to the PHYs 0-31.

ii. *Engdahl et al.*

The Examiner relies on *Engdahl et al.* as teaching a system in which multiple devices communicate on a network cable 11 via time division multiplexing. Applicant does not dispute this point.

However, the present invention is significantly different from that which is taught in *Engdahl et al.* That is because *Engdahl et al.* is concerned with time division multiplexing on a completely different level, i.e., the network level, rather than the interface between the data link layer and the physical layer as in the presently claimed invention.

More specifically, applicant notes that the SMAC 100 illustrated in Figs. 5A and 5B is exemplary of an SMAC in a given station 12-16 in the network. (See, e.g., Col. 4, Ins. 39-42). Each station 12-16 is connected to the network cable 11 via a node 20 as is shown in Fig. 1. Each node 20 includes an SMAC 100 which enables the station 12-16 to communicate over the network via the cable 11. Communication is by way of

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MAC frames 21 exchanged between the SMACs 100 of respective devices via the network cable 11.

Notably, however, the communication of MAC frames 21 as described in *Engdahl et al.* is across the network layer. *Engdahl et al.* does not teach or suggest time division multiplexed communication between a MAC and a number of physical layer devices along a common bus serving as a direct interface between the data link layer and the physical layer as recited in amended claims 1, 7, 13 and 16.

The following Diagrams A and B perhaps best illustrate the differences between the present invention and *Engdahl et al.* Diagram A illustrates *Engdahl et al.* and the manner in which the MAC frames 21 are transmitted via time division multiplexing via the network layer. Diagram B illustrates the present invention and the manner in which a given MAC controls a plurality of physical devices via the common bus at the interface between the data link layer and the physical layer.

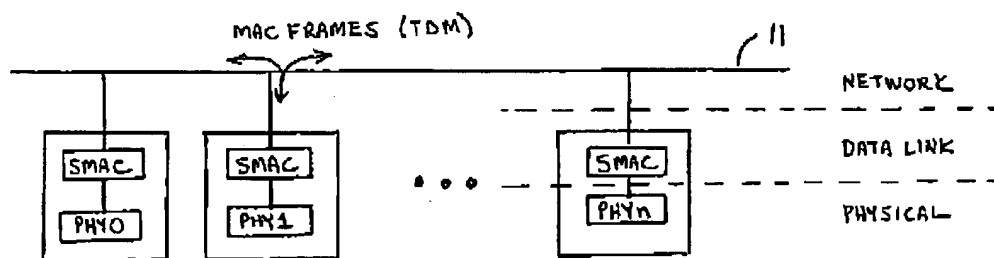


Diagram A (Engdahl et al.)

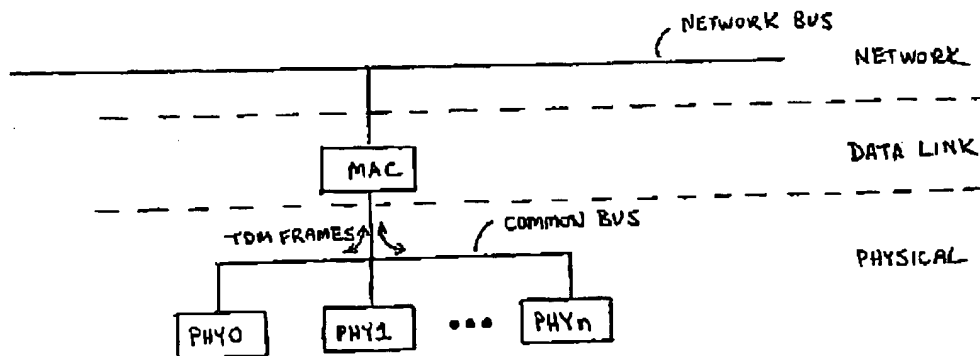


Diagram B (Present Invention)

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In view of the above-discussed distinctions, applicant respectfully submits that *Engdahl et al.* does not teach or suggest the present invention as recited in amended claims 1, 7, 13 and 16. Withdrawal of the rejection is respectfully requested.

### III. CONCLUSION


Accordingly, all claims 1-18 are believed to be allowable and the application is believed to be in condition for allowance. A prompt action to such end is earnestly solicited.

Should the Examiner feel that a telephone interview would be helpful to facilitate favorable prosecution of the above-identified application, the Examiner is invited to contact the undersigned at the telephone number provided below.

Should a petition for an extension of time be necessary for the timely reply to the outstanding Office Action (or if such a petition has been made and an additional extension is necessary), petition is hereby made and the Commissioner is authorized to charge any fees (including additional claim fees) to Deposit Account No. 18-0988.

Respectfully submitted,

RENNER, OTTO, BOISSELLE & SKLAR, LLP

  
Mark D. Saralino  
Reg. No. 34,243

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The Keith Building  
1621 Euclid Avenue  
Nineteenth Floor  
Cleveland, Ohio 44115  
(216) 621-1113  
C:\GENAMD\amdsp388.amd.wpd

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